MULTI-PURPOSE VEHICLE COVER

BACKGROUND OF THE INVENTION

This invention relates to a vehicle cover. More particularly, the present invention relates to a multi-purpose vehicle cover to efficiently prevent snow or frost from accumulating on vehicle windows while simplifying vehicle-covering and cover-removing steps.

As shown in FIG. 1, a vehicle cover 1 generally functions to cover a vehicle body 3 other than wheels 2, and a rubber string is employed to elastically hold the cover 1 to the body of the vehicle 3. However, such a conventional vehicle cover requires a relatively longer time period and a substantial endeavor each time to properly cover up a vehicle. An improved vehicle cover in Korea Utility Model No. 1999-0028219 discloses a vehicle cover for covering vehicle windows and roof; however there still are relative disadvantages and inconveniences in disassembly and storage.

There is no known prior art vehicle cover as taught in the present invention.

SUMMARY OF THE INVENTION

The present invention is contrived to overcome the conventional disadvantages. Accordingly, it is an object of the present invention to provide a multi-purpose vehicle cover capable of covering a roof and windows of a vehicle

easily by a single person, thereby enhancing usability and product reliability.

Another object of this invention is to allow a convertibility of the vehicle cover to a canopy when required, thereby improving customer satisfaction.

To achieve these and other objects, a multi-purpose vehicle cover comprises a roof cover portion, side wings detachably attached to side edges of the roof cover portion, front and rear flaps correspondingly extending from front and rear edges of the roof cover portion. Bands made of a fabric material are sewn between the roof cover portion and the front and rear flaps to facilitate folding of the front and rear flaps against the roof cover portion. The roof cover portion, the side wings and the front and rear flaps are each formed of a compound resin sheet having a layer of air filled material between upper and lower film sheets.

Although the present invention is briefly summarized, the full understanding of the invention can be obtained by the following drawings, detailed description and appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other features, aspects and advantages of the present invention will become better understood with reference to the accompanying drawings, wherein:

FIG. 1 is a perspective view showing a conventional vehicle cover covering a vehicle;

FIG. 2 is a perspective view showing assembly of a multi-purpose vehicle cover to a vehicle according to a first embodiment of the present invention;

FIG. 3 is a cross-sectional view taken along line A-A in FIG. 2;

FIG. 4 is a cross-sectional view taken along line B-B in FIG. 2; and

FIG. 5 is a perspective view showing a canopy-converted vehicle cover according to a second embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to FIGS. 2 to 5, a multi-purpose vehicle cover according to the present invention will now be described. As shown therein, the multi-purpose vehicle cover includes a roof cover portion 1, side wings 2, front and rear flaps 3, 4. The side wings 2 are each attached to corresponding opposed side edges of the roof cover portion 1 to become flappable against the roof cover portion 1. Here, a zipper may be employed between the roof cover portion 1 and the side wings 2 so that the wings 2, 3 become detachably engaged to the roof cover portion 1. In the alternative, an elongated patch of hook members and an elongated patch of loop members may be interchangeably used

along the side wings and the opposed side edges of the roof cover portion 1 for detachable engagement of the side wings 2 to the roof cover portion 1. Also, a compound resin sheet is employed to constitute the respective portions 1, 2, 3, 4 of the vehicle cover.

The respective compound resin sheets are each formed by laminating a layer of air filled material 21 between top and bottom film sheets 22, 23. The layer of air filled material 21 serves to reserve heat and cushion to the compound resin sheets. In the embodiment shown in figure 2, the front and rear flaps 3, 4 are formed to extend from the roof cover portion 1 and partitioned by a band of respective first and second bands of fabric materials 30, 31. A first band of fabric material 30 is attached between the roof cover portion 1 and the front flap 3, and a second band 31 of fabric material is attached between the roof cover portion 1 and the rear flap 4. Each of the first and second band of fabric material 30, 31 is sewn from the upper film sheet 22 and through the compound resin sheets so that the front and rear flaps 3, 4 become also flappable against the roof cover potion 1 resulting from flexibility caused by the downward sewing of the bands of fabric 30, 31 and subsequent deflation of the layer of air filled material 21 in the portion along the length of the first and second bands of fabric material 30 stitching.

Likewise, the respective compound resin sheets are formed such that the layer of air filled material 21 comprises a plurality of adjacent rows of linear air filled cavities 25. The compound resin sheets is formed by substantially waving the layer of air filled material 21 in a heat-treatment between the film sheets 22, 23 in a manner in which the resin sheets respectively form evenly flat sheet surfaces despite the outline of the layer of air filled material 21.

Meanwhile, extension panels 3-1, 4-1 are flappably attached to respective side edges of both the front and rear flaps 3, 4. In the embodiments shown in figures 2 and 5, an opening 41 is formed in each respective outer corner of each extension panel suitable to receive a canopy pole 40 when the vehicle cover is alternatively used as a canopy. Additional engagement members 50, 51 are preferably formed both in side edge portions of the side wings 2 and in outer edge portions of the extension panels 3-1, 4-1 to properly maintain engagement between the side wings 2 and the extension panels 3-1, 4-1. The additional engagement members 50, 51 may be selected from mutually fixable articles such as hook and piles, hook and holes, snap buttons, and detachable magic tapes.

A third fabric band 13 is sewn to the front edge of the front flap, and a fourth fabric band is sewn to the front edge of the rear flap to finish the air mat 21 and the film

sheets 22, 23. Additionally, an elastic string 15 is provided on the ends of each of the third and fourth fabric bands 13, and a hook 16 is formed in each end of the rubber string 15 to become hooked onto a hookable portion of the vehicle such as on the rims of the vehicle between the wheel spokes.

Reference numeral 24 in FIG. 3 denotes a groove formed by linearly suppressing a selected one of the air cavities 25 from above the upper film sheet 21, and reference numeral 60 in FIG. 4 denotes ferrite magnets either embedded in the lower film sheet 23 or attached to a lower surface portion of the roof cover portion 1 using an adhesive tape 61. Preferably, the ferrite magnet 60 is formed in each of the four corners of the roof cover portion 1.

The thusly constituted vehicle cover according to the present invention is easily folded by the side wings 2 and the front and rear flaps 3, 4 along the first and second bands of fabric material 30, 31 for storage. When required, the vehicle cover is additionally folded along the groove 24 to decrease the size of the vehicle cover. That is, the respective side wings 2, and front and rear flaps 3, 4 are naturally folded over onto the roof cover portion 1 by the first and second bands of fabric material 30, 31, and the folded vehicle cover is further folded along the groove 24 to a smaller size. The serial folding is implemented by first and second bands of fabric material 30, 31 sewn

between the roof cover portion 1 and the respective wings and flaps 2, 3, 4 and then by the groove 24.

Specifically, when the first and second bands of fabric material 30, 31 are sewn down from the upper film sheet 22 and through the lower resin sheets, the corresponding portion of the layer of air filled material 21 becomes depressed since the corresponding air cavity 25 becomes eliminated accordingly, whereby the subsequently thinned resin portion sewn down by the first and second bands of fabric material 30, 31 produces foldable characteristics. This mechanism also enables an easy spread of the folded vehicle cover. The two step folding and unfolding mechanism allows a user to easily spread the vehicle cover for covering a target vehicle and at the same time to fold the spread vehicle cover for storage with ease without a helping hand.

For a better performance, the multi-purpose vehicle cover according to the present invention selectively adopts a magnetic engagement where a magnet 60 is attached to selected portions of the roof cover portion 1 so as to maintain stability when covered over a vehicle. Also, the engagement members 50, 51 are selectively employed to make a complete vehicle covering irrespective of vehicle kinds and the vehicle covering is completed by hooking the hooks 16 in the vehicle wheels.

The side wings 2 are detachably connected to the roof cover portion 1, for example, using a zipper so that vehicle side windows can remain uncovered to guide more sunshine into the vehicle by detaching the side wings 2 in winter whereas the side wings 2 can remain attached to the roof cover portion 1 for heat control in summer.

As shown in FIG. 5, the vehicle cover is alternatively employed as a canopy by attaching or detaching the side wings 2 to or from the roof cover portion 1 in which a top of the canopy pole 40 is hooked in the opening 41. The vehicle cover can be used comfortably as a mat.

Although the invention has been described in considerable detail with reference to certain preferred versions thereof, other versions are possible by converting the aforementioned construction. Therefore, the scope of the invention shall not be limited by the specification specified above and the appended claims.